

What is Universal Design?

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How can a home last a lifetime? The answer is Universal Design.

Universal Design (UD) is the design of products and environments to be useable by all people, to the greatest extent possible, without the need for adaptation, or specialized design. In short, Universal Design fits all users regardless of age, height, skill, or physical functioning.

The Center for Universal Design at North Carolina State University has developed a list of seven principles for Universal Design:

Principle One – Equitable Use

The design is useful and marketable to all people with diverse abilities.

Principle Two – Flexibility in Use

The design accommodates a wide range of preferences and abilities

Principle Three – Simple and Intuitive Use

Use of design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level.

Principle Four – Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Principle Five – Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions

Principle Six – Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue

Principle Seven – Size and Space is Appropriate for Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility.

By implementing UD in housing at the design stage, the environment will be available for use by all individuals. UD can have a significant impact on affordable housing. Universally-designed structures grant flexibility and reduce the need to make accommodations for new residents. Individuals with busy families will appreciate the

Article prepared for and published in the Low Income Housing Institute's *HOUSING WASHINGTON* newsletter.

effort saving aspects of the design, while senior or disabled residents will not only appreciate the ease of use, but also may be able to remain in the residence longer as the



design takes into account changing needs.

Example of a Universally Designed Kitchen: note variations in counter height, contrasting tile borders, pull out shelves, and open space below sink. Source: Easter Seals Society of America

Existing homes can also incorporate the principles of UD. Many of the changes necessary to accommodate a wide variety of users can be done with minimal alterations to the structure. Home modifications such as the installation of grab bars in the bathroom, changing door knobs to the lever style handles, and replacing other fixtures with more user-friendly versions can be accomplished in almost any home. Modifying the environment fosters independence for the resident, and can lead to sustainability – the resident will not have to move as their physical needs change.

Universal Design can be implemented throughout the home. Features include:

- Entrances without steps make it easier in the dark, while pushing a stroller, moving furniture, or in a wheelchair
- First floor master bedroom
- Light switches located between 44 and 48 inches from the floor are more accessible to children, and easier to reach when hands are full
- Counters of varying height allow the whole family to help in meal preparation
- Under-counter cabinets with adjustable shelves that slide out on rollers
- Self-cleaning ovens
- Adjustable height shower heads adjust to each user
- Shower stalls lined with a grout-free product that resembles ceramic tile, but requires only occasional scrubbing and no extensive maintenance.

People are remaining in their homes longer than in previous decades. Homes are becoming multi-generational. Universal design is a concept that creates an open and useable home throughout the family's lifetime. UD goes beyond ADA building codes and guidelines by taking into account the needs of all users, not

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HOUSING WASHINGTON newsletter.**

just the disabled. UD provides ease of use, safety, and quality in home and product design.

Here at Aging and Disability Services, we are working with our advisory council, organizations and agencies, and community members to promote the use of UD through the development of a web site, presentations, and a brochure. Our hope is that UD will become commonplace in housing design. If you would like to join our effort, please contact Allison Ruff at allison.ruff@ci.seattle.wa.us or Margaret Casey at margaret.casey@ci.seattle.wa.us